

AMENDMENT AND RESPONSE

Serial Number: 09/458,779

Filing Date: December 10, 1999

Title: SEQUENCE AND METHOD FOR INCREASING PROTEIN EXPRESSION IN CELLULAR EXPRESSION SYSTEMS

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Dkt: 1211.001US1

Sub B3 8. [Amended] The polynucleotide of claim 1, further comprising a sequence encoding a heterologous target protein.

Ref C 9. [Amended] The polynucleotide of claim 8, further comprising a second promoter operably linked to the [a] sequence encoding the target protein [operably linked to a second promoter].

Sub B3 12. [Amended] The polynucleotide of claim 2, wherein the yeast protein is from [is] a *Saccharomyces cerevisiae*, *Schizosaccharomyces pombe*, *Yarrowia lipolytica*, *Pichia pastoris*, *Hansenula polymorpha*, or *Kluyveromyces lactis*.

A5 13. [Amended] A polynucleotide expression vector comprising a polynucleotide encoding a functional Vff2p, or a structural [or functional] homolog of Vff2p.

Sub B3 17. [Amended] The expression vector of claim 13, further comprising a [first] promoter sequence operatively linked to the sequence encoding the Vff2p.

A5 18. [Amended] The expression vector of claim 17 wherein the [first] promoter is a promoter that functions in a host cell to direct transcription of the sequence encoding the Vff2p.

Sub B3 19. [Amended] The expression vector of claim 13, further comprising a sequence encoding a heterologous target protein.

A5 24. [Amended] A recombinant host cell comprising a cell genetically altered to express a protein encoded by a polynucleotide sequence encoding a functional Vff2p, or a structural [or functional] homolog of Vff2p.

A5 27. [Amended] The host cell of claim 25, further comprising a sequence encoding a heterologous target protein.

Sub B8 > 31. [Amended] A method for increasing protein production in a host cell, comprising introducing Vff2p to [a host] the cell and culturing the cell.

AO > 33. [Amended] A method for increasing protein secretion from a host cell, comprising introducing Vff2p to [a host] the cell and culturing the cell.

QbB7 > 36. [Amended] The protein of claim 35 having an amino acid sequence [essentially corresponding to] comprising SEQ ID NO:2.

R1 > 37. [Amended] A method of selecting for a yeast secretory mutant cell containing a polynucleotide sequence encoding a Vff2p, or a structural [or functional] homolog of Vff2p, operably linked to a [first] promoter, the method comprising growing the [recombinant] secretory mutant cell at a temperature of about 32-37°C.

R1 > 42. [Amended] The method of claim 37, wherein the polynucleotide further comprises a sequence encoding a heterologous target protein operably linked to a second promoter.

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed April 10, 2000. No references were cited in the Office Action.

Applicants' Representative thanks Examiners Robert Schwartzman and Katherine Davis for graciously extending the opportunity to interview this application by telephone on September 8, 2000. Section 112, first paragraph issues were discussed during the interview, as were proposed amendments to the claims.

Claims 1, 6-9, 12, 13, 17-19, 24, 27, 31, 33, 36, 37 and 42 are amended; as a result, claims 1-42 are now pending in the application.